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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,649	02/05/2004	Christopher T. Pierce	NC 85003	8805

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EXAMINER

GONZALEZ, MADELINE

ART UNIT PAPER NUMBER

2859

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/774,649

Applicant(s)

PIERCE ET AL.

Examiner

Madeline Gonzalez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/5/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation “the peltier communicating with the heat sink such that the first side of the peltier is maintained at a common temperature”. This limitation is confusing because it is not clear with what structure the first side of the peltier will have a common temperature.

Claim 1 also recites the limitation “the reference standard and the test piece communicating with the second side of the peltier; and a data acquisition device, the data acquisition device able to record and compare differences in temperatures of the test piece and the reference standard”. This limitation is confusing because it is not clear how the test piece and the reference standard will have differences in temperatures if they are in communication with the same side of the peltier.

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Claim 4 recites the limitation “the peltier communicating with the heat sink such that the negative side of the peltier is maintained at a common temperature”. This limitation is confusing because it is not clear with what structure the negative side of the peltier will have a common temperature.

Claim 4 also recites the limitation “the reference standard and the test piece communicating with the positive side of the peltier; and a data acquisition device, the data acquisition device able to record and compare differences in temperatures of the test piece and the reference standard”. This limitation is confusing because it is not clear how the test piece and the reference standard will have differences in temperatures if they are in communication with the same side of the peltier.

Furthermore, it was not possible to provide an interpretation for the confusing limitations as stated above, consistent with the specification, because it is the Examiner's position that once *(possibly duplicate claims)* these claims are modified to overcome the rejection, they will resemble claim 5. Accordingly, claims 1 and 4 have been withdrawn from further consideration on the merits.

Claims 2 and 3 are rejected and withdrawn from further consideration on the merits due to their dependency on claim 1.

### *Drawings*

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the reference standard and the test piece communicating with the second side of the peltier, as stated in claim 1, and the reference

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standard and the test piece communicating with the positive side of the peltier, as stated in claim 4, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

4. Claims 1, 2, 4 and 5 are objected to because of the following informalities:
  - a) Claims 1, 4 and 5: "devise" in lines, 8, 9 and 10 (twice in each line), respectively, should be replaced with --device--.

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- b) Claims 1, 4 and 5: The claims are directed to a “corrosion sensor, the sensor to detect corrosion on a test piece”. However, there is no limitation stating how the corrosion is detected.
- c) Claim 2: --wherein-- should be added after “enclosure,” in line 2.
- d) Claim 2: --are-- should be added after “standard” in line 2.
- e) Claim 5: --wherein-- should be added after “enclosure,” in line 12.
- f) Claim 5: --are-- should be added after “standard” in line 12.

Appropriate correction is required.

5. Claim 14 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 14 depends on claim 13, and the dependency chain gets to claim 10. Claim 10 includes the same limitation as claim 14; therefore, claim 14 is not further limiting claim 10.

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*Allowable Subject Matter*

6. Claims 5-17 would be allowable if rewritten to overcome the objection(s) set forth in this Office action.

*Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ansuini et al. ('664), Hodge, Braunling et al. ('927), Jaeger, Shapiro et al. ('111) and Girshovich et al. ('331) disclose corrosion sensors. Park et al. ('254) and Zalameda et al. ('502) disclose methods for detecting defects. Hiraoka et al. ('980) discloses a sensing system for measuring specific value of substance to be measured by utilizing change in thermal resistance, the system including a heat sink, a temperature difference setting thin film and a temperature difference detection thin film. Ingallinera discloses a method for determining oxidation.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Madeline Gonzalez whose telephone number is (571) 272-2243. The examiner can normally be reached on Monday-Friday (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MG



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